

The figure 7 is also mysteriously contained without a remainder in any number consisting of three figures repeated as:

$$\begin{array}{r} 7 \overline{)348348} \\ 49764 \end{array} \quad \text{or:} \quad \begin{array}{r} 7 \overline{)643643} \\ 91949 \end{array}$$

The number 37 if multiplied by 3 or any multiple of 3 always gives the same figure three times in the answer, as:

$$\begin{array}{r} 37 \\ 9 \\ \hline 333 \end{array} \quad \text{or} \quad \begin{array}{r} 37 \\ 24 \\ \hline 148 \\ 74 \\ \hline 888 \end{array}$$

This holds good up to 27. From 27 to 54 the middle figures are the same; the two outside ones make together the same as:

$$\begin{array}{r} 37 \\ 48 \\ \hline 296 \\ 148 \\ \hline 1776 \end{array}$$

A very peculiar number is 142857. If multiplied by any of the first six digits it gives the same figures in the same order, only starting with different figures, as—

$$\begin{array}{r} 142857 \\ 4 \\ \hline 571428 \end{array} \quad \text{or} \quad \begin{array}{r} 142857 \\ 6 \\ \hline 857142 \end{array} \quad \begin{array}{r} 142857 \\ 7 \\ \hline 999999 \end{array}$$

If multiplied by 7 it makes all 9's; after 7 the result will be the same again, only the first and last figures must be added up as one.

An easier way of casting out 9's is to add up instead of dividing by 9, until you get down to a unit.

$$\begin{array}{l} \text{Ex.} \quad 2387465 = 35 \text{ but } 3 + 5 = 8 \\ \quad \quad 68 = 14 \text{ ,, } 1 + 4 = 5 \\ \quad \quad \hline 19099720 \\ \quad \quad 14324790 \\ \quad \quad \hline 162347620 = 31 \text{ ,, } 3 + 1 = 4 \end{array} \quad \begin{array}{l} \\ \\ \\ 40 = 4 \end{array}$$

Both come to the unit 4, which proves the sum right.

SIDE LIGHTS ON THE P.N.E.U. FROM "PUNCH'S" POINT OF VIEW.

DOMESTIC DRAMA.

DIVIDED COUNSELS.

Lady Oriflamme. Mornin' Harry. Where's Adela?

Lord Greymere (her son). Adela? Oh, she's P.N.E.U.-ing—the Proper-Nursery-Education Union, y' know. It's all the rage with the New Mothers, *alias* the Pneu-Mas. I say, Mater, don't tell Adela I called 'em that. She's tremendously in earnest about it, so far.

Lady O. But—but she knows no more about education than—than—

Lord G. Than you do. Precisely. That's just the idea. It's because you didn't educate us that we have to—

Lady O. Didn't *educate* you! Fiddlesticks! Didn't I pack you off to Eton as soon as they'd have you?

Lord G. Oh, Eton! Yes, Eton—if you call that education. They *don't*, you see, though they still send their sons there. There isn't anywhere else.

Lady O. What *do* they call education then?

Lord G. Oh—sort of thing, making 'em do what they're told, and not tell lies, and—

Lady O. Fudge! What's new in that, I'd like to know? I'm sure I've smacked you often enough for tellin' lies.

Lord G. Hah! That dear old slipper! I told 'em all about it—the Pneumatics, y' know. Adela took me to one of their meetings. Five hundred Pneu-Mas and me. I was the only man.

Lady O. You must have looked a fool!

Lord G. I did—at first. They shoved me on the platform, and asked me for a speech, by gad. So I gave 'em you and your slipper, because they don't believe in puishment, and they all said "Shame," and looked as pleased as Punch. I had to say something, 'y know.

Lady O. H'm. I'd like to slipper the lot of them. Was Adela there?

Lord G. Adela? You bet. She was in the chair, educating the rest of 'em.

Lady O. Pooh! Why don't she begin at home? She can no more manage Tommy than you can.

Lord G. Oh, I can manage Tommy all right.

Lady O. You manage Tommy! My dear boy!

Lord G. As well as you can, anyhow, my dear mother. Adela says you spoil him.

Lady O. Oh, does she! Well, all I can say is——

Tommy (*aged eight, enters swinging dead cat by tail*). Oh, Daddy! Look Daddy! Look what I've found on the dust heap! Quite a good cat!

Lord G. What the —— Look here, chuck that beastly thing away. And don't you seen your Granny? Say Good-morning to her.

Tommy. Oh, Daddy! Bowen says if I hang it up in the sun it will get all maggoty, and——

Lord G. Did you hear what I said? Chuck the beastly thing away. At once!

Tommy. Bowen says——

Lady O. Do you like chocolates, darlin'?

Tommy. Chocolate creams I do. You may hold my cat if you like, and if you come fishing with me you can put the maggots on. Bowen says they're more tastier than——

Lord G. Now look here. I've had enough of this. You shall obey me, d' you hear, you little——

Tommy. Oh, oh! I hate you—I hate you. Let me go. Oh!

Lady O. Stop, Harry, stop! For Heaven's sake don't let us have a scene. Why can't you leave the child alone? Here, my pet! Come and talk to your old Granny. And stop cryin', darlin'.

Tommy. Shan't! And I'm n-not crying. Mum-ummy says he m-mustn't box my ears. And Bub-Bowen says its very——

Lord G. Oh, d—— Bowen.

Lady O. Harry, how *can* you? Here, darlin', Granny's got lots more chocolates. And now say you're sorry, pet.

Tommy. I'm n-not sorry. And Mummy says I mustn't tell lies. And Bowen says people who swear will go to——

Lady Greymere (*enters hurriedly*). Oh, good morning,

Granny, I mustn't stop a minute, good morning, we had such *splendid* papers—you ought to have been there, Harry—about Thought-Turning, and never losing your temper, at least not letting them see when you do, because of *course* men all do sometimes, and nothing can be worse for children except giving them sweets, Granny, and Dr. Somebody said the right thing to do is to turn their thoughts to something *else* instead of punishing them, which is what some people always do, and it's just a sign of weakness. And now I must swallow some lunch—and oh, Harry, will you tell Bowen he *must* send in some asparagus, he lets it *all* run to seed, and you really *ought* to stop his wages or something, it's the only way with those people.

Tommy. Bowen says what's the use when it's all ate up in the kitchen. He says if some people was half as clever as they thought they was——

Lady G. Oh, Tommy, what *have* you got in your arms?—why, it's a cat; and he's been crying, Harry, and your mouth is all smudgy with chocolate—oh, Granny, how could you?—you oughtn't to have brought it in here, Tommy, but as you have you may run and get your paint-box, and throw it away and paint it from memory.

Tommy. Don't want to paint. Went to get maggots.

Lady G. Oh, and what do you think, Tommy, I saw just now?—a funeral with black plumes and horses, and people inside, and you can ask Bowen for a spade, and have a nice little funeral of your own and bury the cat, and Daddy and Granny will go to it—I can't myself, I must get back to town—and will you see that he does it? Good-bye. [*Exit.*]

Lady O. H'm! Is that the new system? That what they call Thought-Turning?

Lord G. Oh, it's not the system. The system's all right. It's—i'ts Adela.

Lady O. It's just a pack of nonsense. Here, darlin', you may have all the chocolates. And now run along, there's a good boy.

Lord G. And if you don't bury that blessed old cat in double quick time, I'll give you the best hiding you ever had in your life. D' you hear?